O f D a a (L w LID) a H Y Ga N- C f a P- N a,CN

: the energy yield gain of n-type TOPCon (Group 1) versus p-type PERC (Group 2) with fixed axis

: the average degradation of Group 1 (TOPCon with fixed axis) and Group 2 (PERC with fixed axis) is

,

(38Á34Á57.77ÂN, 106Á0Á55.72ÂE) Ningxia, north western of China.

Two groups of total 20 pieces of bifacial modules of two differ

bifacial module contains 144 pieces of the half-cut cell, as shown in Table 1)

1#N-TOPCon	JKM555N-72HL4-BDV	10
2#P-PERC	JKM540M-72HL4-BDVP	10

Table 1: Sample information

cy at 60kWh/mİ were also measured and calculated. The out

1-min interval.

installed on a fixed axis with a tilt angle of 40Á (as shown in Figure 1) Moreover, the pitch and clearance of each array were 10 m.

Figure 1. Fixed axis

ing groups (measured from September 2022 - March 2023) are shown in Table 2 and Figure 3.

Table 2: Irradiation and reflectance

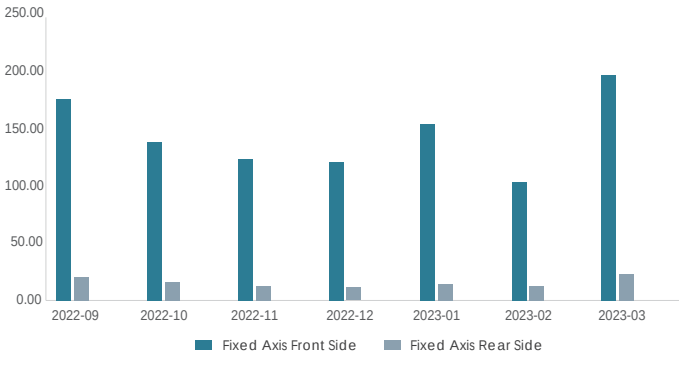

Figure 3. Monthly cumulative irradiation

tember 2022-March 2023) were shown in Table 3 and Figure 4. And the energy yield per watt (Wh/W) was calculated according to Formula 1 was indicated in Table 3 and Figure 4.